

What is claimed:

1. A method for screening a substance reducing expression of CD81 gene, comprising the following steps (a), (b) and (c):

(a) a step of contacting a test substance with cells capable of expressing CD81 gene,

(b) a step of measuring an amount of CD81 gene expression in the cells contacted with the test substance, and comparing the amount with an amount of the corresponding gene expression in control cells not contacted with the test substance, and

(c) a step of selecting the test substance reducing the amount of CD81 gene expression on the basis of the comparison results in (b).

2. A method for screening a substance reducing expression of CD81, comprising the following steps (a), (b) and (c):

(a) a step of contacting a test substance with cells capable of expressing CD81,

(b) a step of measuring an expression amount of CD81 in the cells contacted with the test substance, and comparing the expression amount with an expression amount of the protein in control cells not contacted with the test substance, and

(c) a step of selecting the test substance reducing the expression amount of CD81 on the basis of the comparison results in (b).

3. A method for screening a substance inhibiting function (activity) of CD81, comprising the following steps (a), (b) and (c):

(a) a step of contacting a test substance with CD81,

(b) a step of measuring function (activity) of CD81 caused by the step

in (a) above, and comparing the function (activity) with function (activity) of CD81 not contacted with the test substance, and (c) a step of selecting the test substance inhibiting the function (activity) of CD81 on the basis of the comparison results in (b).

4. A method for screening an agent as an active ingredient for preventing, improving or treating IBD described in any one of claim 1 to 3.

5. An agent for preventing, improving or treating IBD, comprising a substance which reduces expression of CD81 gene as active ingredient.

6. The agent for preventing, improving or treating IBD of claim 5, wherein the substance which reduces expression of CD81 gene is obtainable by the method of claim 1.

7. An agent for preventing, improving or treating IBD, comprising a substance which reduces expression of CD81 or function (activity) of CD81 as an active ingredient.

8. The agent for preventing, improving or treating IBD of claim 7, wherein the substance which reduces expression of CD81 or function (activity) of CD81 is obtainable by the method of claim 2 or 3.

9. The agent for preventing, improving or treating IBD of claim 7, which comprises an anti-CD81 antibody as the active ingredient.

10. The agent for preventing, improving or treating IBD of claim 9, wherein the anti-CD81 antibody is an antibody against mammal CD81.

11. A disease marker for inflammatory bowel disease (hereinafter, IBD), which comprises a polynucleotide having at 15 continuous bases and / or a polynucleotide complementary thereto in the base sequence

of CD81 gene.

12. The disease marker of claim 11, which is used as a probe or a primer for diagnosing IBD.

13. A method for diagnosing IBD, which comprises the following steps (a), (b) and (c) :

(a) a step of binding a RNA prepared from a biopsy of a subject or a complementary polynucleotide transcribed therefrom to the disease marker of claim 11 or 12,

(b) a step of measuring the RNA derived from the biopsy or the complementary polynucleotide transcribed from the RNA wherein the RNA or the polynucleotide is bound to the disease marker, by using the disease marker as an index, and

(c) a step of judging the attack of IBD on the basis of the measurement results in (b) .

14. The method for diagnosing IBD of claim 13, wherein the step of judging the attack of IBD described in (c) is performed by comparing the measurement result of the subject with a measurement result of a normal person, and then conducting by using an increase of an amount bound to the disease marker as an index.

15. A disease marker comprising an antibody which recognizes CD81.

16. The disease marker of claim 15, which is used as a probe for diagnosing IBD.

17. A method for diagnosing IBD, which comprises the following steps

(a), (b) and (c) :

(a) a step of binding a protein prepared from a biopsy of a subject

to the disease marker of claim 15 or 16,

(b) a step of measuring the protein derived from the biopsy bound to the disease marker using the disease marker as an index, and

(c) a step of judging the attack of IBD on the basis of the measurement results in (b).

18. The method for diagnosing IBD of claim 17, wherein the step of judging the attack of IBD in (c) is performed by comparing the measurement result of the subject with a measurement result of a normal person, and then conducting by using an increase of an amount bound to the disease marker as an index.